WEST Search History

DIALOG Web

DATE: Monday, February 11, 2002

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=AND		
L1	c-polysaccharide.clm.	2	L1
L2	polysaccharide-c.clm.	0	L2
L3	pnc.clm.	2	L3
L4	phosphorylcholine.clm. and immunoassay.clm.	1	L4
L5	phosphoryl-choline.clm. and immunoassay.clm.	0	L5
L6	choline.clm. and immunoassay.clm.	7	L6
L7	phosphoryl near2 choline.clm. and immunoassay.clm.	1	L7
L8	acetamido near2 amino near5 trideoxygalactose	0	L8
L9	acetamido-amino-tri-deoxy-galactose	0	L9
L10	acet-amido-amino-tri-deoxy-galactose	0	L10
L11	acetamido-4-amino-tri-deoxy-galactose	0	L11
L12	acetamido-4-amino	0	L12
L13	acetamidoamino	2	L13
L14	tri-deoxy-galactose	0	L14
L15	trideoxy-galactose	0	L15
L16	trideoxygalactose	0	L16
L17	deoxygalactose	73	L17
L18	2,4,6-deoxygalactose	0	L18
L19	2,4,6-trideoxy	2	L19
L20	streptococ$.clm.	1163	L20

L21	(pneumonoc$ or pneumon$).clm.	707	L21
L22	L21 and l20	273	L22
L23	L22 and (carbohydrate or polysaccharide or poly-saccharide or saccharide or di-saccharide or disaccharide or cpolysaccharide)	135	L23
L24	L22 and (carbohydrate or polysaccharide or poly-saccharide or saccharide or di-saccharide or disaccharide or cpolysaccharide).clm.	50	L24
L25	(device or apparatus or strip or stick or test).clm. and l20	100	L25
L26	l25 and (teichoic or lipo-teichoic or lipoteichoic or ribitol or pentasaccharide or phosphorylcholine).clm.	0	L26
L27	(teichoic or lipo-teichoic or lipoteichoic or ribitol or pentasaccharide or phosphorylcholine).clm.	205	L27
L28	l27 and (device or apparatus or strip or stick or test).clm.	19	L28
L29	friesen.in.	196	L29
L30	L29 and immunoassay	20	L30
L31	L30 and streptoco$	0	L31
L32	streptoco$.ti.	288	L32
L33	streptoco$.ti. and immunochromatog$	0	L33
L34	streptoco$.ti. and chromatog$	196	L34
L35	streptoco$.ti. and immuno$	179	L35
L36	L35 and (pneumo$ or diplococc$ or pneumonia$)	125	L36
L37	L36 and (saccharide or pentasaccharide or pnc or polysaccharide or c-polysaccharide or polysaccaride-c or epitope or teichoic)	113	L37
L38	L37 and (kit or device or apparat$ or strip or immunochromat$ or transport or flow or lateral)	102	L38
	L37 and (kit or device or apparat$ or strip or		

L39	immunochromat$ or transport or flow or lateral).clm.	3	L39

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☐ 1. Document ID: US 6335205 B1

L20: Entry 1 of 13 File: USPT Jan 1, 2002

DOCUMENT-IDENTIFIER: US 6335205 B1
TITLE: Method and test strip for determining an analyte

CLAIMS:

1. A chromatographic test strip for determining an analyte in an analyte solution, comprising

at least one absorbent matrix located on a carrier material and defining a plurality of zones each in liquid-transferring contact with the adjacent zone(s), the plurality of zones having an application zone at one end and a suction zone at the other end,

a conjugate zone located in the application zone or adjoining the application zone and containing a visually detectable, particle-labelled analyte binding partner,

a chromatographic zone adjoining the conjugate zone,

a capture zone located between the chromatographic zone and the suction zone and containing solid phase-bound binding partners for the analyte or for an unlabelled analyte-specific binding partner, and

a fluorescent dye located in the application zone or in a zone between the application zone and the capture zone and formed to migrate chromatographically in the analyte solution at least partly through the capture zone and to provide fluorescence contrast amplification of the particle label when the particle label is bound in the capture zone.

2. The test strip of claim 1, wherein an unlabelled, migratable, analyte-specific binding partner which has a binding site for the solid phase-bound binding partner is located in the application zone or between the application zone and the capture zone.

3. The test strip of claim 1, wherein the capture zone is in the form of a line.

4. The test strip of claim 1, wherein the label is a metal sol.

5. The test strip of claim 4, wherein the label is gold.

6. The test strip of claim 1 wherein streptavidin is the solid phase-bound binding partner immobilized in the capture zone and the unlabeled analyte-specific binding partner is a biotin-labeled binding partner for the analyte.

7. The test strip of claim 1, wherein the fluorescent dye is impregnated in the application zone.

8. The test strip of claim 1, wherein the fluorescent dye is impregnated in the conjugate zone.

13. A test strip for determining the presence of an analyte in a solution, the test strip comprising:

at least one absorbent matrix defining zones, each zone being in liquid-transferring contact with at least one adjacent zone and having an application zone and a suction zone located downstream of the application zone,

a conjugate zone located upstream of the suction zone, the conjugate zone containing a visually detectable, particle-labelled analyte binding partner,

a chromatographic zone adjoining the conjugate zone,

a capture zone located between the chromatographic zone and the suction zone and containing solid phase-bound binding partners for the analyte or for an unlabelled analyte-specific binding partner, and

a fluorescent dye located upstream of the capture zone, the fluorescent dye being formed to migrate chromatographically in the analyte solution at least partly through the capture zone and to provide fluorescence contrast amplification of the particle label when the particle label is bound in the capture zone.

14. The test strip of claim 13 wherein an unlabelled, migratable, analyte-specific binding partner which has a binding site for the solid phase-bound binding partner is located in the application zone or between the application zone and the capture zone.

15. The test strip of claim 13 wherein the capture zone is in the form of a line.

16. The test strip of claim 13 wherein the label is a metal sol.

17. The test strip of claim 13 wherein the label is gold.

18. The test strip of claim 13 wherein streptavidin is the solid phase-bound binding partner immobilized in the capture zone.

19. The test strip of claim 13 wherein the fluorescent dye is impregnated in the application zone.

20. The test strip of claim 13 wherein the fluorescent dye is impregnated in the conjugate zone.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC
Draw Desc | Image

2. Document ID: US 6214629 B1

L20: Entry 2 of 13 File: USPT Apr 10, 2001

DOCUMENT-IDENTIFIER: US 6214629 B1
TITLE: Analytical test device and method for use in medical diagnoses

CLAIMS:

1. An analytical test device suitable for determining the presence of at least one analyte contained in a liquid sample while permitting rapid and efficient flow of the sample through at least one defined pathway in which reactions determinative of the analyte take place, said device comprising:

a top layer having an upper surface formed with a through hole for the addition of the sample, said through hole being in registry with a sample delivery channel formed in the upper surface of the top layer, said sample delivery channel in operative communication with a sample circulation channel closed at its terminal ends and formed with inner and outer walls to define a pathway for the sample in the lower surface of the top layer, the inner walls of the circulation channel defining an indent in the lower surface of the top layer;

a bottom layer attached to the top layer, said bottom layer and top layer holding a dry porous carrier therebetween, said dry porous carrier having a fluid pathway;

said fluid pathway of said dry porous carrier layer configured to contain at least one detection zone having a border in operative communication with a segment of the sample circulation channel and an opposite end in operative communication with a capture zone channel having an entrance end and a closed terminal end thereby to provide a conduit through which the liquid sample may flow by capillary action from the sample circulation channel from a plurality of different directions onto the porous carrier and to the entrance of the capture zone channel, into the capture zone channel, to the terminal end of the capture zone channel; the distances between all points where the sample is permitted to enter the detection zone and said entrance end being essentially the same; and

the delivery channel, circulation channel, detection zone and capture zone channel forming a defined pathway through which the liquid sample flows from the through hole to the terminal end of the capture channel;

there being immobilized reagent in the capture zone channel which will react with said analyte to form a detectable product.

2. The device of claim 1 further comprising at least one mobile, labelled reagent which will specifically react with the analyte to form a labelled complex which will move by capillary action into the capture zone channel; and there being immobilized reagent in the capture zone channel which will react with and concentrate the labelled complex to form a detectable reaction product.

3. The device of claim 2 wherein the mobile reagent in the detection zone is a labelled antibody which will react with one epitope on the analyte and the immobilized reagent is an antibody which will react with another epitope on the analyte.

5. The device of claim 2 wherein, the immobilized reagent is selected from the group consisting of streptavidin and avidin.

11. The device of claim 1 wherein the label is a gold label.

12. The device of claim 11 wherein said border of said detection zone is polygonal or forms part of a polygon.

13. The device of claim 12 wherein said border of said detection zone is rectangular or forms part of a rectangle.

25. The device of claim 1 wherein said border of said detection zone is semicircular.

28. An analytical test device suitable for determining the presence of at least one analyte contained in a liquid sample while permitting rapid and efficient flow of the sample through at least one defined pathway in which reactions determinative of the analyte take place, said device comprising:

a top layer having an upper surface formed with a through hole for the addition of the sample, said through hole being in registry with a sample delivery channel formed in the upper surface of the top layer, said sample delivery channel in operative communication with a sample circulation channel closed at its terminal ends and formed with inner and outer walls to define a pathway for the sample in the lower surface of the top layer, the inner walls of the circulation channel defining an indent in the lower surface of the top layer;

a bottom layer attached to the top layer, said bottom layer and top layer holding a dry porous carrier therebetween, said dry porous carrier having a fluid pathway;

said fluid pathway of said dry porous carrier layer configured to contain at least one detection zone having a border in operative communication with a segment of the sample circulation channel and an opposite end in operative communication with a capture zone channel having an entrance end and a closed terminal end thereby to provide a conduit through which the liquid sample may flow by capillary action from the sample circulation channel from a plurality of different directions onto the porous carrier and to the entrance of the capture zone channel, into the capture zone channel, to the terminal end of the capture zone channel; and

the delivery channel, circulation channel, detection zone and capture zone channel forming a defined pathway through which the liquid sample flows from the through hole to the terminal end of the capture channel;

there being immobilized reagent in the capture zone channel which will react with said analyte to form a detectable product.

31. The device of claim 29 wherein said border of said detection zone is polygonal or forms pail of a polygon.

32. The device of claim 31 wherein said border of said detection zone is rectangular or forms part of a rectangle.

33. The device of claim 28 further comprising at least one mobile, labelled reagent which will specifically react with the analyte to form a labelled complex which will move by capillary action into the capture zone channel; and there being immobilized reagent in the capture zone channel which will react with and concentrate the labelled complex to form a detectable reaction product.

35. The device of claim 33 wherein, the immobilized reagent is selected from the group consisting of

streptavidin and avidin.

39. The device of claim 28 wherein the mobile reagent in the detection zone is a labelled antibody which will react with one epitope on the analyte and the immobilized reagent is an antibody which will react with another epitope on the analyte.

41. The device of claim 28 wherein the label is a gold label.

53. A method for determining the presence of at least one analyte contained in a liquid sample comprising the steps of:

i) providing an analytical test device suitable for determining the presence of at least one analyte contained in a low volume of a liquid biological sample while permitting rapid and efficient flow of the sample through at least one defined pathway which reactions determinative of the analyte take place, said device comprising:

a) a top layer having an upper surface formed with a through hole for the addition of the sample, said through hole being in registry with a sample delivery channel formed in the upper surface of the top layer, said sample delivery channel in operative communication with a sample circulation channel closed at its terminal ends and formed with inner and outer walls to define a pathway for the sample in the lower surface of the top layer, the inner walls of the circulation channel defining an indent in the lower surface of the top layer;

b) a bottom layer attached to the top layer, said bottom layer and top layer holding a dry porous carrier therebetween, said dry porous carrier having a fluid pathway;

c) said fluid pathway of said dry porous carrier layer configured to contain at least one detection zone having a border in operative communication with a segment of the sample circulation channel and an opposite end in operative communication with a capture zone channel having an entrance end and a closed terminal end thereby to provide a conduit through which the liquid sample may flow by capillary action from the sample circulation channel from a plurality of different directions onto the porous carrier and to the entrance of the capture zone channel, into the capture zone channel, to the terminal end of the capture zone channel, the delivery channel, circulation channel, detection zone and capture zone channel forming a defined pathway through which the liquid sample flows from the through hole to the terminal end of the capture channel; there being immobilized reagent in the capture zone channel which will react with said analyte to form a detectable product;

ii) applying a quantity of said fluid sample to said detection zone;

iii) permitting a sufficient period of time to elapse for the fluid sample to flow from the detection zone from said plurality of different directions to the capture zone channel and any said analyte therein to form a detectable reaction product at said capture zone; and

iv) identifying the presence of said at least one analyte in said fluid sample by detecting any said detectable reaction product at said capture zone.

61. The method of claim 53 wherein said border of said detection zone is polygonal or forms part of a polygon.

62. The method of claim 61 wherein said border of said detection zone is rectangular or forms part of a rectangle.

☐ 3. Document ID: US 6171870 B1

L20: Entry 3 of 13 File: USPT Jan 9, 2001

DOCUMENT-IDENTIFIER: US 6171870 B1
TITLE: Analytical test device and method for use in medical diagnoses

CLAIMS:

1. An analytical test device for determining the presence of at least one analyte in a fluid sample, said device comprising:

a dry porous carrier;

at least one detection zone covering at least a segment of an area of said carrier;

a sample circulation channel in operative communication with said detection zone, the sample being permitted to enter from said sample circulation channel into said detection zone from a plurality of different directions;

at least one capture zone channel having an entrance end which is in operative communication with the detection zone to permit sample to flow from the detection zone into the capture zone channel, the distances between all points where the sample is permitted to enter the detection zone and said entrance end being essentially the same.

4. An analytical test device for determining the presence of at least one analyte in a fluid sample, said device comprising:

a dry porous carrier through which a sample can flow by capillary action;

a sample delivery means through which the sample can be applied to the device and flow thereinto;

a sample circulation channel which is closed at its terminal ends and which circumscribes an area of the carrier;

at least one detection zone covering at least a segment of said area of the carrier, wherein at least a segment of the sample circulation channel conforms with a border of the detection zone and is in operative communication with said detection zone, across which border the sample is permitted to enter into the detection zone simultaneously from a plurality of different directions and to form a stream flowing away

from said border, the detection zone containing at least one mobile, labelled specific binding reagent for the at least one analyte, which said at least one mobile, labelled specific binding reagent is capable of reacting with said at least one analyte to form at least one labelled complex which is capable of moving along with said stream; and

at least one capture zone channel having an entrance end and a closed terminal end, the entrance end being in operative communication with the detection zone to permit said stream to flow from the detection zone into the capture zone channel, the distances between all points of said border and said entrance end being essentially the same, the capture zone channel containing at least one immobilized specific binding reagent, which at least one immobilized specific binding reagent is capable of reacting with and concentrating said at least one labelled complex to form at least one detectable reaction product.

9. The device of claim 1 or 4 comprising two or more detection zones arranged on said area of the carrier, there being an equal number of capture zone channels, each in operative communication with a corresponding detection zone.

15. The analytical test device of claim 4 suitable for determining the presence of at least one analyte contained in a liquid sample while permitting rapid and efficient flow of the sample through at least one defined pathway in which reactions determinative of the analyte take place, said device comprising:

a top support layer and a bottom support layer, the top support layer having an upper surface and a lower surface, the upper surface being formed with a through hole for the addition of the sample, the through hole being in registry with a sample delivery channel formed in the lower surface of the top layer and in operative communication with a sample circulation channel closed at its terminal ends and formed with inner and outer walls to define a pathway for the sample in the lower surface of the top layer, the inner walls of the sample circulation channel defining an indent in the lower surface of the top layer;

the bottom support layer being attached to the top layer;

a dry porous carrier layer through which the sample can flow by capillary action sandwiched between the top support layer and the bottom support layer, the porous carrier layer being configured to contain at least one detection zone having a border in operative communication with a segment of the sample circulation channel and a second opposite end in operative communication with a capture zone channel having an entrance end and a closed terminal end thereby to provide a conduit through which the liquid sample may flow by capillary action from the sample circulation channel to the terminal end of the capture zone channel;

the sample delivery channel, sample circulation channel, detection zone and capture zone channel forming a defined pathway through which the liquid sample flows from the through hole to the terminal end of the capture channel;

there being at least one mobile, labelled reagent which will specifically react with the analyte in the detection zone to form a labelled complex which will move by capillary action into the capture zone channel; and

there being immobilized reagent in the capture zone channel which will react with and concentrate the labelled complex to form a detectable reaction product.

22. The device of claim 15 wherein said at least one analyte is a cardiac analyte and said liquid sample is whole blood containing red blood cells and plasma, the dry porous carrier causing said red blood cells to separate chromatographically from the plasma to provide a plasma front moving in the capture zone channel and a red blood cell front upstream thereof, a detectable portion of the labelled complex being between the red blood

cell front and the plasma front so that the labelled complex is substantially free of red blood cells when said labeled complex is captured in the capture channel by reaction with the immobilized reagent.

23. The device of claim 22 wherein the mobile reagent in the detection zone is a labelled antibody which will react with one epitope on the analyte and the immobilized reagent is an antibody which will react with another epitope on the analyte.

24. The device of claim 22 wherein, in the detection zone, there is a mixture of a mobile labelled antibody which will react with one epitope on the analyte and a mobile biotin labelled antibody which will react with another epitope on the analyte, and immobilized reagent is an avidin.

31. The device of claim 15 wherein, in the detection zone, there is a mixture of a mobile labelled antibody which will react with one epitope on the analyte and a mobile biotin labelled antibody which will react with another epitope on the analyte, and the immobilized reagent is selected from the group consisting of streptavidin and avidin.

33. The device of claim 32 wherein the label is a gold label.

37. A method for determining the presence of at least one analyte in a fluid sample comprising the sequential steps of:

i) providing an analytical test device suitable for determining the presence of at least one analyte contained in a liquid sample while permitting rapid and efficient flow of the sample through at least one defined pathway in which reactions determinative of the analyte take place, said device comprising:

a) a dry porous carrier through which sample can flow by capillary action;

b) at least one detection zone covering at least a segment of an area of said carrier, and a sample circulation channel in operative communication with said detection zone, such that said sample is permitted to enter from said sample circulation channel into said detection zone from a plurality of different directions, and said detection zone containing at least one mobile, labelled binding reagent for said at least one analyte, which mobile, labelled binding reagent is capable of reacting with said analyte to form a labelled complex;

c) at least one capture zone channel having an entrance end which is in operative communication with the detection zone to permit sample to flow from the detection zone into the capture zone channel, the distances between all points where said sample is permitted to enter said detection zone and said entrance end being essentially the same, said capture zone channel containing at least one immobilized specific binding reagent, which immobilized specific binding reagent is capable of reacting and concentrating said labelled complex to form a detectable reaction product;

ii) applying a quantity of said fluid sample to said detection zone;

iii) permitting the fluid sample to flow from the detection zone from said plurality of different directions to the capture zone channel and any said analyte therein to form a detectable reaction product at said immobilized specific binding reagent in said capture zone channel; and

iv) identifying the presence of said at least one analyte in said fluid sample by detecting said detectable reaction product at said immobilized specific binding reagent in said capture zone channel.

41. An analytical test device for determining the presence of at least one analyte in a fluid sample, said device

comprising:

a dry porous carrier;

at least one detection zone covering at least a segment of an area of said carrier;

a sample circulation channel in operative communication with said detection zone, the sample being permitted to enter from said sample circulation channel into said detection zone from a plurality of different directions;

at least one capture zone channel having an entrance end which is in operative communication with the detection zone to permit sample to flow from the detection zone into the capture zone channel.

44. An analytical test device suitable for determining the presence of at least one analyte contained in a liquid sample while permitting rapid and efficient flow of the sample through at least one defined pathway in which reactions determinative of the analyte take place, said device comprising:

a dry porous carrier through which a sample can flow by capillary action;

a sample delivery means through which the sample can be applied to the device and flow thereinto;

a sample circulation channel in operative communication with said sample delivery means, which is closed at its terminal ends and which circumscribes an area of the carrier;

at least one detection zone covering at least a segment of said area of the carrier, wherein at least a segment of the sample circulation channel conforms with a border of the detection zone and is in operative communication with said detection zone, across which border the sample is permitted to enter into the detection zone simultaneously from a plurality of different directions and to form a stream flowing away from said border, the detection zone containing at least one mobile, labelled specific binding reagent for the at least one analyte, which said at least one binding reagent is capable of reacting with said at least one analyte to form at least one labelled complex which is capable of moving along with said stream; and

at least one capture zone channel having an entrance end and a closed terminal end, the entrance end being in operative communication with the detection zone to permit said stream to flow from the detection zone into the capture zone channel, the capture zone channel containing at least one immobilized specific binding reagent, which at least one binding reagent is capable of reacting with and concentrating said at least one labelled complex to form at least one detectable reaction product.

50. The device of claim 46 comprising two or more defined pathways, each pathway comprising a detection zone arranged on said area of the carrier, and a capture zone channel in operative communication with said detection zone.

51. The device of claim 46 wherein the label is a gold label.

52. The device of claim 46 wherein, in the detection zone, there is a mixture of a mobile labeled antibody which will react with one epitope on the analyte and a mobile biotin labelled antibody which will react with another epitope on the analyte, and the immobilized reagent is selected from the group consisting of streptavidin and avidin.

55. The device of claim 46 wherein said at least one analyte is a cardiac analyte and said liquid sample is whole

blood containing red blood cells and plasma, the dry porous carrier causing said red blood cells to separate chromatographically from the plasma to provide a plasma front moving in the capture zone channel and a red blood cell front upstream thereof, a detectable portion of the labelled complex being between the red blood cell front and the plasma front so that the labelled complex is substantially free of red blood cells when said labeled complex is captured in the capture channel.

56. The device of claim 55 wherein the mobile reagent in the detection zone is a labelled antibody which will react with one epitope on the analyte and the immobilized reagent is an antibody which will react with another epitope on the analyte.

57. The device of claim 55 wherein, in the detection zone, there is a mixture of a mobile labelled antibody which will react with one epitope on the analyte and a mobile biotin labelled antibody which will react with another epitope on the analyte, and the immobilized reagent is an avidin.

64. An analytical test device suitable for determining the presence of at least one analyte contained in a liquid sample while permitting rapid and efficient flow of the sample through at least one defined pathway in which reactions determinative of the analyte take place, said device comprising:

a dry porous carrier through which a sample can flow by capillary action;

a sample delivery means through which the sample can be applied to the device and flow thereinto;

a sample circulation channel in operative communication with said sample delivery means, which is closed at its terminal ends and which circumscribes an area of the carrier, said sample circulation channel being polygonal or forming part of a polygon;

at least one detection zone covering at least a segment of said area of the carrier, wherein at least a segment of the sample circulation channel conforms with a border of the detection zone and is in operative communication with said detection zone, across which border the sample is permitted to enter into the detection zone simultaneously from a plurality of different directions and to form a stream flowing away from said border, the detection zone containing at least one mobile, labelled specific binding reagent for the at least one analyte, which said at least one binding reagent is capable of reacting with said at least one analyte to form at least one labelled complex which is capable of moving along with said stream; and

at least one capture zone channel having an entrance end and a closed terminal end, the entrance end being in operative communication with the detection zone to permit said stream to flow from the detection zone into the capture zone channel, the capture zone channel containing at least one immobilized specific binding reagent, which at least one binding reagent is capable of reacting with and concentrating said at least one labelled complex to form at least one detectable reaction product.

69. The device of claim 64 wherein, in the detection zone, there is a mixture of a mobile labeled antibody which will react with one epitope on the analyte and a mobile biotin labelled antibody which will react with another epitope on the analyte, and the immobilized reagent is selected from the group consisting of streptavidin and avidin.

70. An analytical test device suitable for determining the presence of at least one analyte contained in a liquid sample while permitting rapid and efficient flow of the sample through at least one defined pathway in which reactions determinative of the analyte take place, said device comprising:

a dry porous carrier through which a sample can flow by capillary action;

a sample delivery means through which the sample can be applied to the device and flow thereinto;

a sample circulation channel in operative communication with said sample delivery means, which is closed at its terminal ends and which circumscribes an area of the carrier, said sample circulation channel being rectangular or forming part of a rectangle;

at least one detection zone covering at least a segment of said area of the carrier, wherein at least a segment of the sample circulation channel conforms with a border of the detection zone and is in operative communication with said detection zone, across which border the sample is permitted to enter into the detection zone simultaneously from a plurality of different directions and to form a stream flowing away from said border, the detection zone containing at least one mobile, labelled specific binding reagent for the at least one analyte, which said at least one binding reagent is capable of reacting with said at least one analyte to form at least one labelled complex which is capable of moving along with said stream; and

at least one capture zone channel having an entrance end and a closed terminal end, the entrance end being in operative communication with the detection zone to permit said stream to flow from the detection zone into the capture zone channel, the capture zone channel containing at least one immobilized specific binding reagent, which at least one binding reagent is capable of reacting with and concentrating said at least one labelled complex to form at least one detectable reaction product.

☐ 4. Document ID: US 6090596 A

L20: Entry 4 of 13 File: USPT Jul 18, 2000

DOCUMENT-IDENTIFIER: US 6090596 A
TITLE: Method and means for the production of hyaluronic acid

CLAIMS:

1. An isolated strain of supercapsulated streptococcus having a mucoid colonial morphology, wherein supercapsulated members of the strain have a density no greater than 1.03 g/cm.sup.3 and are capable of forming a capsule having a diameter of greater than 4 .mu.m, and wherein members of the strain are capable of producing hyaluronic acid with molecular weight exceeding 6 million.

2. The isolated strain of supercapsulated streptococcus according to claim 1, selected from the group consisting of supercapsulated group A streptococci and supercapsulated group C streptococci.

3. The isolated strain of supercapsulated streptococcus according to claim 1, wherein said members are capable of producing a hyaluronic acid having a molecular weight of from 6.3 million to 9.5 million.

4. The isolated strain of supercapsulated streptococcus according to claim 1, wherein the isolated strain of supercapsulated streptococcus has a near infrared whole cell spectra first principal component that is greater than or equal to 0.4.

5. The isolated strain of supercapsulated streptococcus according to claim 1, wherein the isolated strain of supercapsulated streptococcus is non-hemolytic.

6. A method of producing high molecular weight hyaluronic acid comprising the steps of:

(i) selecting a supercapsulated strain of a streptococcus, supercapsulated members thereof having a density of no greater than 1.03 g/cm.sup.3 and being capable of forming a capsule having a diameter of greater than 4 .mu.m,

(ii) cultivating said strain at a temperature of from 30.degree. C. to 35.degree. C. in a reactor under agitation conditions substantially free from shear forces and in a culture medium which is free of metal ions which promote hyaluronic acid degradation, does not release from the reactor metal ions which promote the degradation of hyaluronic acid and has a pH in the range of from 5.6 to 6.2, whereby hyaluronic acid is formed, and

(iii) isolating the hyaluronic acid formed in step (ii) from the culture medium, wherein the supercapsulated strain is non-hemolytic and produces hyaluronic acid with molecular weight exceeding 6 million.

7. The method according to claim 6, wherein the strain is selected from the group consisting of supercapsulated group A streptococci and supercapsulated group C streptococci.

9. The method according to claim 8, wherein the mutagenesis comprises the steps of:

a. plating streptococci on a culture plate;

b. adding crystals of a mutagenic chemical to the culture plate;

c. incubating the culture plate to produce zones of inhibition around the crystals;

d. selecting streptococcus colonies growing in the vicinity of the zone edge and having mucoid morphology;

e. subjecting the selected streptococcus colonies to density gradient centrifugation; and

f. deriving a streptococcus strain from a selected colony having supercapsulated members having a density of no greater than 1.03 g/cm.sup.3.

12. The method according to claim 9, wherein the streptococci is Streptococcus equi.

☐ 5. Document ID: US 6087123 A

L20: Entry 5 of 13 File: USPT Jul 11, 2000

DOCUMENT-IDENTIFIER: US 6087123 A
TITLE: Metal-containing ribonucleotide polypeptides

CLAIMS:

1. An isolated ribonucleotide polypeptide ("RNP") containing a metal ion selected from the group consisting of Ca, Cu, and Zn, wherein the ribonucleotide portion of said RNP comprises:

AAAGAGAAAGCUGCUCCGAAGNCAG (SEQ ID NO:1).

the polypeptide portion of said RNP comprises all or part of the amino acid sequence:

NH.sub.2 -TKLEDHLEGIINIFHQYSVRLG (SEQ ID NO:3) - HYDTLIKRELKQLITKELPNTLKN - TKDQGTIDKIFQNLDANQDEQVSF - KEFVVLVTDVLITAHDNIHKE-COOH

and wherein

the molecular mass of said RNP is about 40000 Daltons.

2. The ribonucleotide polypeptide according to claim 1, wherein said ribonucleotide polypeptide contains at least one of said metal ion in a RNP complex.

11. The method according to claim 4, wherein culture of the leucocytes is carried out in a cell culture medium comprising: KCl 5.0 m mol/l; KH.sub.2 PO.sub.4 0.2 m mol/l; NaCl 120.0 m mol/l; Na.sub.2 HPO.sub.4 0.8 m mol/l; Na.sub.2 SO.sub.4 0.2 m mol/l; L-Ascorbic acid 0.2 m mol/l, Cholin Chloride 50.0 .mu.mol/l; 2-Desoxy-D-ribose 5.0 .mu.; D-Galactose 0.5 m mol/l; D-Glucose 5.0 m mol/l; D-Glucurono-.gamma.-lacton 0.1 m mol/l; Glycerine 50.0 .mu.mol/l myo-Inosite 0.5 m mol/l; Na-Acetate 0.2 m mol/l; Na-Citrate 50.0 .mu.mol/l; Na-Pyruvate 0.1 m mol/l; D-Ribose 20.0 .mu.mol/l; Succinic acid 0.1 m mol/l; xylite 10.0 .mu.mol/l; D-Xylose 20.0 .mu.mol/l; CaCl.sub.2 2.0 m mol/l; MgCl.sub.2 1.0 m mol/l; NaHCO.sub.3 10.0 mol/l; Human serun albumin 7.7 .mu.mol/l; Penicillin 1.0 .mu.mol/l; Streptomycin 1.0 .mu.mol/l; L-Glutamine 1.0 m mol/l; L-Alanine 0.2 m mol/l; L-Asparagine 0.1 m mol/l; L-aspartic acid 0.1 m mol/l; L-glutamic acid 0.1 m mol/l; glycine 0.2 m mol/l; L-proline 0.1 m mol/l; L-serine 0.1 m mol/l; L-arginine 0.4 m mol/l; 4-aminobenzoic acid 2.0 .mu.mol/l; L-cysteine 0.2 m mol/l; L-hstidine 0.1 m mol/l; L-hydroxyproline 10.0 .mu.mol/l; L-isoleucine 0.2 m mol/l; L-leucine 0.2 m mol/l; L-lysine-HCl 0.2 m mol/l; L-methionine 0.1 m mol/l; L-ornithine 50.0 .mu.mol/l; L-phenylaline 0.1 m mol/l; sacosine 50.0 .mu.mol/l; taurine 0.1 m mol/l; L-threonine 0.2 m mol/l; L-tryptophane 50.0 .mu.mol/l; L-tyrosine 0.1 m mol/l; -valine 0.2 m mol/l; glutathion reduced 3.0 .mu.mol/l; carnosine 5.0 .mu.mol/l; mevalolactone 50 .mu.mol/l; adenine 50.0 .mu.mol/l; adenosine 50.0 .mu.mol/l; cytidine 50.0 .mu.mol/l; guanine 5.0 .mu.mol/l; guanosine 20.0 .mu.mol/l; hypoxanthine 5.0 .mu.mol/l; 5-methylcytosine 5.0 .mu.mol/l; thymidine 20.0 .mu.mol/l; thymine 5.0 .mu.mol/l; uracil 5.0 .mu.mol/l; uridine 20.0 .mu.mol/l; xanthine 5.0 .mu.mol/l; biotine 1.0 .mu.mol/l; D-Ca-pantothenate 5.0 mol/l; ergocalciferol 0.5 .mu.mol/l; D,L-carnitine 50.0 .mu.mol/l; folic acid 5.0 .mu.mol/l; D,L-.alpha.-lipoic acid 2.0 .mu.mol/l; menadione 0.2 .mu.mol/l; nicotinic

acid amide 20.0 .mu.mol/l; pyridoxal-HCl5.0 .mu.mol/l; pyridoxine-HCl 2.0 .mu.mol/l; riboflavin 1.0 .mu.mol/l; rutine 5.0 .mu.mol/l; thiamine-HCl 5.0 .mu.mol/l; D,L-.alpha.-tocopheryl acetate 1.0 .mu.mol/l; vitamine K.sub.1 0.2 .mu.mol/l; vitamine B.sub.12 0.5 .mu.mol/l; vitamin U 1.0 .mu.mol/l; cholesterine 1.0 .mu.mol/l; coenzyme-Q.sub.10 0.1 .mu.mol/l; linoleic acid 1.0 .mu.mol/l; linoleic acid 5.0 .mu.mol/l; oleic acid 5.0 .mu.mol/l; ethanol 1.0 m mol/l; pH7.10; and concanavaline A 50.0 n mol/l; which contains at least one defined protein, said protein is preferably serum albumin.

19. The method according to claim 18, further comprising preparing the raw fractions and obtaining the isolated RNP by preparative and analytical molecular screen filtration, anion and cation exchanger chromatography or one-pot adsorption processes, chromatography on hydroxylapatite, zone precipitation chromatography and/or circulatory or cascade molecular screen filtration in a normal or HPLC form.

22. The method according to claim 4, further comprising, in order to obtain a monocytary RNP, a mixed leucocyte population or only monocytes are cultivated, the cells are stimulated by "CON" during the culture, the culture solution is mixed after termination of the culture with ammonium sulphate up to a saturation of 90%, the precipitated proteins are separated from the residue containing ammonium sulphate, the residue is concentrated, purified by preparative molecular screen filtration, an ion exchanger chromatography stage, a cation exchanger chromatography stage, a chromatography on hydroxylapatite, a zone precipitation chromatography and a cascade molecular screen filtration, and are obtained after separation of the accompanying extraneous substances in the eluate of the cascade molecular screen filtration, in a highly purified form.

23. The method according to claim 4, further comprising in order to obtain a leucocytary RNP, a mixed leucocyte population or only granulocytes are cultivated, the cells if necessary are stimulated during the culture by "CON", the culture solution is mixed after termination of the culture with ammonium sulphate up to a saturation of 35%, the precipitated proteins are separated from the residue containing ammonium sulphate, are re-dissolved and purified by an anion exchanger chromatography stage, a preparative molecular screen filtration, a cation exchanger chromatography stage, a chromatography on hydroxylapatite, a zone precipitation chromatography and a cascade molecular screen filtration, and, after separation of the accompanying extraneous proteins, the leucocytary RNP is obtained in a highly purified form in the eluate of the cascade molecular screen filtration.

33. The method according to claim 26, wherein culture of the leucocytes is carried out in a cell culture medium comprising: KCl 5.0 m mol/l; KH.sub.2 PO.sub.4 0.2 m mol/l; NaCl 120.0 m mol/l; Na.sub.2 HPO.sub.4 0.8 m mol/l; NA.sub.2 SO.sub.4 0.2 m mol/l; L-Ascorbic acid 0.2 m mol/l; Cholin Chloride 50.0 .mu.mol/l; 2-Desoxy-D-ribose 5.0 .mu.; D-Galactose 0.5 m mol/l; D-Glucose 5.0 m mol/l; D-Glucurono-.gamma.-lacton 0.1 m mol/l; Glycerine 50.0 .mu.mol/l; myo-Inosite 0.5 m mol/l; Na-Acetate 0.2 m mol/l; Na-Citrate 50.0 .mu.mol/l; Na-Pyruvate 0.1 m mol/l; D-Ribose 20.0 .mu.mol/l; Succinic acid 0.1 m mol/l; xylite 10.0 .mu.mol/l; D-Xylose 20.0 .mu.mol/l; CaCl.sub.2 2.0 m mol/l; MgCl.sub.2 1.0 m mol/l; NaHCO.sub.3 10.0 m mol/l; Human serun albumin 7.7 .mu.mol/l; Penicillin 1.0 .mu.mol/l; Streptomycin 1.0 .mu.mol/l; L-Glutamine 1.0 m mol/l; L-Alanine 0.2 m mol/l; L-Asparagine 0.1 m mol/l; L-aspartic acid 0.1 m mol/l; L-glutamic acid 0.1 m mol/l; glycine 0.2 m mol/l; L-proline 0.1 m mol/l; L-serine 0.1 m mol/l; L-arginine 0.4 m mol/l; 4-aminobeneoic acid 2.0 .mu.mol/l; L-cysteine 0.2 m mol/l; L-hstidine 0.1 m mol/l; L-hydroxyproline 10.0 .mu.mol/l; L-isoleucine 0.2 m mol/l; L-leucine 0.2 m mol/l; L-lysine-HCl 0.2 m mol/l; L-methionine 0.1 m mol/l; L-omithine 50.0 .mu.mol/l; L-phenylaline 0.1 m mol/l; sarcosine 50.0 .mu.mol/l; taurine 0.1 m mol/l; L-threonine 0.2 m mol/l; L-tryptophane 50.0 .mu.mol/l; L-tyrosine 0.1 m mol/l; -valine 0.2 m mol/l; glurathion reduced 3.0 .mu.mol/l; carnosine 5.0 .mu.mol/l; mevalolactone 5.0 .mu.mol/l; adenine 50.0 .mu.mol/l; adenosine 50.0 .mu.mol/l; cytidine 50.0 .mu.mol/l; guanine 5.0 .mu.mol/l; guanosine 20.0 .mu.mol/l; hypoxanthine 5.0 .mu.mol/l; 5-methylcytosine 5.0 .mu.mol/l; thymidine 20.0 .mu.mol/l; thymine 5.0 .mu.mol/l; uracil 5.0 .mu.mol/l; uridine 20.0 .mu.mol/l; xanthine 5.0 .mu.mol/l, biotine 1.0 .mu.mol/l; D-Ca-pantothenate 5.0 mol/l; ergocalciferol 0.5 .mu.mol/l; D,L-carninine

50.0 .mu.mol/l; folic acid 5.0 .mu.mol/l; D,L-.alpha.-lipoic acid 2.0 .mu.mol/l; menadione 0.2 .mu.mol/l; nicotinic acid amide 20.0 .mu.mol/l; pyridoxal-HCl 5.0 .mu.mol/l; pyridoxine-HCl 2.0 .mu.mol/l; riboflavin 1.0 .mu.mol/l; rutine 5.0 .mu.mol/l; thiamine-HCl 5.0 .mu.mol/l; D,L-.alpha.-tocopheryl acetate 1.0 .mu.mol/l; vitamin K.sub.1 0.2 .mu.mol/l; vitamine B.sub.12 0.5 .mu.mol/l; vitamin U 1.0 .mu.mol/l; cholesterine 1.0 .mu.mol/l; coenzyme-Q.sub.10 0.1 .mu.mol/l; linoleic acid 1.0 .mu.mol/l; linoleic acid 5.0 .mu.mol/l; oleic acid 5.0 .mu.mol/l; ethanol 1.0 m mol/l; pH7.10; and concanavaline A 50.0 n mol/l; which contains at least one defined protein, said protein is preferably serum albumin.

41. The method according to claim 40, further comprising preparing the raw fractions and obtaining the isolated RNP by preparative and analytical molecular screen filtration, anion and cation exchanger chromatography or one-pot adsorption processes, chromatography on hydroxylapatite, zone precipitation chromatography and/or circulatory or cascade molecular screen filtration in a normal or HPLC form.

44. The method according to claim 26, further comprising, in order to obtain a monocytary RNP, a mixed leucocyte population or only monocytes are cultivated, the cells are stimulated by "CON" during the culture, the culture solution is mixed after termination of the culture with ammonium sulphate up to a saturation of 90%, the precipitated proteins ale separated from the residue containing ammonium sulphate, the residue is concentrated, purified by preparative molecular screen filtration, an ion exchanger chromatography stage, a cation exchanger chromatography stage, a chromatography on hydroxylapatite, a zone precipitation chromatography and a cascade molecular screen filtration, and are obtained after separation of the accompanying extraneous substances in the eluate of the cascade molecular screen filtration, in a highly purified form.

45. The method according to claim 26, further comprising in order to obtain a leucocytary RNP, a mixed leucocyte population or only granulocytes are cultivated, the cells if necessary are stimulated during the culture by "CON", the culture solution is mixed after termination of the culture with ammonium sulphate up to a saturation of 35%, the precipitated proteins are separated from the residue containing ammonium sulphate, are re-dissolved and purified by an anion exchanger chromatography stage, a preparative molecular screen filtration, a cation exchanger chromatography stage, a chromatography on hydroxylapatite, a zone precipitation chromatography and a cascade molecular screen filtration, and, after separation of the accompanying extraneous proteins, the leucocytary RNP is obtained in a highly purified form in the eluate of the cascade molecular screen filtration.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
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☐ 6. Document ID: US 5935442 A

L20: Entry 6 of 13 File: USPT Aug 10, 1999

DOCUMENT-IDENTIFIER: US 5935442 A
TITLE: Liquid fluid bed chromatography using conglomerates of controlled density

CLAIMS:

4. The process according to claim 3, wherein;

a) the chromatographic adsorbent particles and liquid proximal to the liquid inlet are agitated to divide the fluid bed into;

i) a turbulent zone having vigorously moving particles, and ii) a non-turbulent zone;

said non-turbulent zone adjoining said turbulent zone; and

b) the extent of said turbulent zone is determined by a degree of agitation selected within a range of from;

i) a degree of agitation providing turbulence only in the uppermost part of the fluid bed, to

ii) a degree of agitation providing turbulence of the particles throughout the fluid bed.

11. The process according to claim 9, wherein the density controlling particles are made of one or more inorganic substances selected from the group consisting of:

anhydrous forms of silicon dioxide;

metal silicates; metal phosphates;

metal oxides; metal sulfides;

crystalline forms of carbon; and amorphous forms of carbon.

18. The process according to claim 1, wherein the active substance comprises a member selected from the group consisting of:

ligands, charged species for ion exchange chromatography, proteins, dyes, enzyme inhibitors, biotin for purification of avidin and other biotin binding proteins, carbohydrates for purification of lectins or glycosidases, protein A, chelates, iminodiacetic acid, amino acids, arginine, lysine, and histidine, sulfated polymers, heparins, benzhydroxamic acid, hydrocarbon groups divinyl sulfone activated substances coupled with mercaptoethanol, 4-hydroxypyridine, 3-hydroxy-pyridine, or 2-hydroxy-pyridine; natural and synthetic polynucleotides and nucleic acids;

carbohydrate based polymers selected from the group consisting, agar, alginate, carrageenan, guar gum, gum arabic, gum ghatti, gum tragacanth, karaya gum, locust bean gum, xanthan gum, agaroses, celluloses, pectins, mucins, dextrans, starches and heparins;

amino acid based polymers selected from the group consisting of gelatins, albumins, hemoglobulins, immunoglobulins including poly- and mono clonal antibodies, antigenes, protein G, lectins, glycoproteins such as ovomucoids, biotin binding proteins, avidin and streptavidin, enzymes, proteases, and protease inhibitors; and

mixtures of these.

26. The process according to claim 25, wherein;

a) the chromatographic adsorbent particles and liquid proximal to the liquid inlet are agitated to divide the fluid bed into:

i) a turbulent zone having vigorously moving particles, and

ii) a non-turbulent zone;

said non-turbulent zone adjoining said turbulent zone; and

b) the extent of said turbulent zone is determined by a degree of agitation selected within a range from:

i) a degree of agitation providing turbulence only in the lower-most part of the fluid bed, to

ii) a degree of agitation providing turbulence of the particles throughout the fluid bed.

☐ 7. Document ID: US 5866006 A

L20: Entry 7 of 13 File: USPT Feb 2, 1999

DOCUMENT-IDENTIFIER: US 5866006 A
TITLE: Coated single particles and their use in fluid bed chromatography

CLAIMS:

7. The process according to claim 5, wherein the density controlling particle is made of one or more inorganic substances, selected from the group consisting of:

anhydrous forms of silicon dioxide;

metal silicates, and metal phosphates;

metal oxides and sulfides;

non-metal oxides;

metal salts;

metallic elements and alloys thereof; and

crystalline and amorphous forms of carbon.

14. The process according to claim 1, wherein the active substance comprises a member selected from the group consisting of:

ligands, charged species for ion exchange chromatography, proteins, dyes, enzyme inhibitors, biotin for purification of avidin and other biotin binding proteins, carbohydrates for purification of lectins or glycosidases, protein A, chelates, iminodiacetic acid, amino acids, arginine, lysine, and histidine, sulfated polymers, heparins, benzhydroxamic acid, hydrocarbon groups divinyl sulfone activated substances coupled with mercaptoethanol, 4-hydroxypyridine, 3-hydroxy-pyridine, or 2-hydroxy-pyridine; natural and synthetic polynucleotides and nucleic acids;

carbohydrate based polymers selected from the group consisting, agar, alginate, carrageenan, guar gum, gum arabic, gum ghatti, gum tragacanth, karaya gum, locust bean gum, xanthan gum, agaroses, celluloses, pectins, mucins, dextrans, starches and heparins;

amino acid based polymers selected from the group consisting of gelatins, albumins, hemoglobulins, immunoglobulins including poly- and mono clonal antibodies, antigenes, protein G, lectins, glycoproteins, biotin binding proteins, avidin and streptavidin, enzymes, proteases, and protease inhibitors; and

mixtures of the above.

24. The process according to claim 23, wherein;

a) the chromatographic adsorbent particles and liquid proximal to the liquid inlet are agitated to divide the fluid bed into;

i) a turbulent zone having vigorously moving particles, and

ii) a non-turbulent zone;

said non-turbulent zone adjoining said turbulent zone; and

b) the extent of said turbulent zone is determined by a degree of agitation selected within a range of from;

i) a degree of agitation providing turbulence only in the uppermost part of the fluid bed, to

ii) a degree of agitation providing turbulence of the particles throughout the fluid bed.

26. The process according to claim 25, wherein;

a) the chromatographic adsorbent particles and liquid proximal to the liquid inlet are agitated to divide the fluid bed into:

i) a turbulent zone having vigorously moving particles, and

ii) a non-turbulent zone;

said non-turbulent zone adjoining said turbulent zone; and

b) the extent of said turbulent zone is determined by a degree of agitation selected within a range from:

i) a degree of agitation providing turbulence only in the lower-most part of the fluid bed, to

ii) a degree of agitation providing turbulence of the particles throughout the fluid bed.

☐ 8. Document ID: US 5759866 A

L20: Entry 8 of 13 File: USPT Jun 2, 1998

DOCUMENT-IDENTIFIER: US 5759866 A
TITLE: Device and method for assaying biological components in sample

CLAIMS:

1. A device for assaying a biological component in a sample comprising:

a sample-receiving port,

a pump-connection port,

a sample-treating zone which is provided with a labeled substance with a label,

a sample-treating and optical-measuring zone which has a porous material having immobilized thereto one of a specifically binding pair, and

a pathway interconnecting these zones and ports;

wherein the sample-treating zone and the sample-treating and optical-measuring zone are positioned between the sample-receiving port and the pump-connection port.

2. A device for assaying a biological component in a sample comprising:

a sample-receiving port,

a pump-connection port,

a sample-treating and optical-measuring zone which has a porous material having immobilized thereto a labeled substance with a label and one of a specifically binding pair, and

a pathway interconnecting these zone and ports;

wherein the sample-treating and optical-measuring zone is positioned between the sample-receiving port and the pump-connection port.

5. A device according to claim 1, wherein:

the sample-treating zone is provided with a labeled substance which is the same substance as the biological component or a modified substance thereof, and a substance which specifically reacts with the biological component is immobilized on the porous material.

6. A device according to claim 1, wherein:

the sample-treating zone is provided with a labeled substance which specifically binds to the biological component at one recognition site thereof, and a substance which specifically reacts with the biological component at the other recognition site thereof, and

a substance capable of binding to the substance which specifically reacts with the biological component at the other recognition site thereof is immobilized on the porous material.

7. A device according to claim 2, wherein:

the sample-treating zone is provided with a labeled substance which specifically binds to the biological component at one recognition site thereof, and a substance which specifically reacts with the biological component at the other recognition site thereof, and

a substance capable of binding to the substance which specifically reacts with the biological component at the other recognition site thereof is immobilized on the porous material.

8. A device according to claim 6, wherein:

the sample-treating zone is provided with a labeled first antibody which specifically binds to the biological component at one recognition site thereof, and a complex of a biotin and a second antibody which specifically reacts with the biological component at the other recognition site thereof, and

avidin or streptoavidin is immobilized on the porous material.

9. A device according to claim 7, wherein:

the sample-treating zone is provided with a labeled first antibody which specifically binds to the biological component at one recognition site thereof, and a complex of biotin and a second antibody which specifically reacts with the biological component at the other recognition site thereof, and

avidin or streptoavidin is immobilized on the porous material.

10. A device according to any one of claims 1, 3, 5, 6, 7, 8 or 9, wherein the sample-receiving zone is positioned between the sample-receiving port and the sample-treating and optical-measuring zone.

11. A device according to any one of claims 1 through 9, wherein the label is a metal colloid or colored latex particle.

13. A device according to any one of claims 1 through 9, wherein each of the sample-treating zone, sample-treating and optical-measuring zone and pathway is formed by a thin layer.

14. A device according to anyone of claims 1 through 9, which further comprises a waste liquid reservoir for storing washing liquid flowed out from the sample-treating and optical-measuring zone.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
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☐ 9. Document ID: US 5628790 A

L20: Entry 9 of 13 File: USPT May 13, 1997

DOCUMENT-IDENTIFIER: US 5628790 A
TITLE: Zirconium oxide zirconium nitride coated valvular annuloplasty rings

CLAIMS:

3. The annuloplasty ring of claim 1, wherein said low elastic modulus metallic composition includes a metal selected from the group consisting of zirconium and zirconium-containing alloys.

4. The annuloplasty ring of claim 3, wherein the component further includes a sub-surface zone containing diffused oxygen.

8. The annuloplasty ring of claim 7, wherein said platelet adhesion reducer is phosphatidyl choline.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 10. Document ID: US 5611347 A

L20: Entry 10 of 13 File: USPT Mar 18, 1997

DOCUMENT-IDENTIFIER: US 5611347 A
TITLE: Zirconium oxide and zirconium nitride coated percutaneous devices

CLAIMS:

3. The percutaneous implant of claim 1, wherein the implant body comprises a metal selected from the group consisting of zirconium and zirconium-containing alloys.

4. The percutaneous implant of claim 3, wherein the implant body further includes a sub-surface zone containing diffused oxygen and the coating includes diffusion-bonded blue to black zirconium oxides.

9. The percutaneous implant of claim 1 further including an additional coating at least partially covering the surfaces of the implant body first end and section therebetween, said additional coating selected from the group consisting of phosphatadyl choline, heparin and proteins.

☐ 11. Document ID: US 5356782 A

L20: Entry 11 of 13 File: USPT Oct 18, 1994

DOCUMENT-IDENTIFIER: US 5356782 A
TITLE: Analytical test apparatus with on board negative and positive control

CLAIMS:

1. An apparatus for determining an analyte of interest in a liquid sample comprising an absorptive material and having a plurality of zones in the direction of fluid flow, wherein:

(i) a first negative control zone of said absorptive material contains an immobilized reactant which does not bind to said analyte of interest;

(ii) a second analytical zone of said absorptive material contains an immobilized reactant which specifically binds to said analyte of interest; and

(iii) a third positive control zone of said absorptive material contains both (a) an immobilized reactant which

specifically binds to said analyte of interest, and (b) a portion of the analyte of interest in solubilizible form, wherein said portion of the analyte is solubilized when contacted with the liquid sample and reacts with the immobilized reactant of said third zone.

2. The apparatus of claim 1, wherein the immobilized reactant of said second zone is an immobilized antibody or an antibody fragment.

3. The apparatus of claim 1, wherein said immobilized reactant is bound to a carrier which is immobilized in said second zone.

9. The apparatus of claim 1, wherein the immobilized reactant of said second zone is selected from the group consisting of an antigen and an epitope containing fragment of an antigen.

10. The apparatus of claim 1, wherein said second zone contains at least one substance selected from the group consisting of protein A, protein G, streptavidin, avidin, and a lectin.

11. The apparatus of claim 1, wherein the immobilized reactants of said second zone and said third zone are identical.

12. The apparatus of claim 1, wherein the immobilized reactant of said third zone and the immobilized reactant of said second zone are identical, and the immobilized reactant of said first zone is an inactive form of the immobilized reactants of said second and third zones, wherein said inactive form cannot specifically bind the analyte.

13. The apparatus of claim 1, wherein said immobilized reactant in said second zone is in a position perpendicular to the direction of fluid flow in said absorptive material.

14. The apparatus of claim 1, wherein said immobilized reactant in said third zone is in a position perpendicular to the direction of the fluid flow in said absorptive material.

15. The apparatus of claim 1, further comprising an additional zone positioned downstream of said third zone for absorption of excess fluid.

16. The apparatus of claim 15, wherein said additional zone contains a reagent which changes color in the presence of a fluid.

17. The apparatus of claim 15, wherein said additional zone contains a reagent which changes color when subjected to a pH change.

18. The apparatus of claim 15, wherein said additional zone contains a reagent which inhibits formation of detectable signal.

20. The kit of claim 19, wherein said labeled receptor is labeled with a label selected from the group consisting of an enzyme, gold, a dye sol, a colored particle, a fluorescer, a chemiluminescer, and a radiolabel.

24. The apparatus of claim 1, further comprising a further zone positioned upstream of said first zone, said further zone containing a substance which reacts with a labeled receptor to provide a detectable signal, and an absorptive means positioned on top of said further zone and in fluid contact therewith, wherein said further zone is in fluid contact with said first zone.

25. The apparatus of claim 24, further comprising a fluid flow inhibition means positioned so as to prevent fluid flow from said absorptive means into said first zone and to direct fluid flow from said absorptive means into said further zone.

26. The apparatus of claim 25, further comprising a second fluid flow inhibition means positioned between said further and first zones and extending along all of a region of fluid contact therebetween.

27. The apparatus of claim 24, further comprising a fluid flow regulating means positioned between said further and first zones which directs fluid flow vertically.

28. The apparatus of claim 1, further comprising an inert support on which said first, second and third zones are positioned.

29. The apparatus of claim 1, wherein the immobilized reactant of said second zone is an immobilized antibody fragment.

☐ 12. Document ID: US 5147777 A

L20: Entry 12 of 13 File: USPT Sep 15, 1992

DOCUMENT-IDENTIFIER: US 5147777 A
TITLE: Biologically active reagents prepared from carboxy-containing polymer, analytical element and methods of use

CLAIMS:

1. A biologically active reagent comprising:

(I) a water-insoluble particle composed of a copolymer having recurring units derived from:

(a) from about 60 to about 99.8 mole percent of one or more ethylenically unsaturated polymerizable oleophilic monomers which provide hydrophobicity to said copolymer,

(b) from about 0.2 to about 40 mole percent of one or more ethylenically unsaturated polymerizable monomers having a reactive carboxy group, or salt thereof, and represented by the structure: ##STR20## wherein R is hydrogen, halo or alkyl of 1 to 3 carbon atoms, M is hydrogen, an alkali metal ion or an ammonium ion and L is an organic linking group having from 8 to 50 atoms selected from the group consisting of carbon, nitrogen, oxygen and sulfur atoms in the linking chain,

said organic linking group further defined as having two or more divalent groups selected from the group consisting of alkylene, arylene, alkylenearylene and arylenealkylene which are connected to each other or terminated with an oxy, thio, imino, carbonyloxy, carbonylimino, ureylene or sulfonylimino group and

(c) from 0 to about 15 mole percent of one or more additional ethylenically unsaturated polymerizable monomers other than those identified in categories (a) and (b) above, and

(II) a biologically active substance covalently attached to said particle through said reactive carboxy group or salt thereof.

5. The reagent of claim 4 wherein said biologically active substance is an antibody which specifically binds with Streptococcus A, a microorganism associated with periodontal disease, carbamazepine, thyroxine, human chorionic gonadotropin, phenobarbital, phenytoin or digoxin.

10. The reagent of claim 9 wherein R is hydrogen or methyl, M is hydrogen or an alkali metal ion, and L comprises two or more alkylene or arylenealkylene groups which are connected or terminated with an oxy, thio, imino (--NR.sup.1 --), carbonyloxy (--COO--), carbonylimino (--CONR.sup.1 --), ureylene (--NR.sup.1 CONR.sup.1 --) or sulfonylimino (--SO.sub.2 NR.sup.1 --) group, wherein each R.sup.1 is independently hydrogen, alkyl having 1 to 10 carbon atoms, cycloalkyl having 4 to 10 carbon atoms or aryl having 6 to 14 carbon atoms.

14. An analytical element comprising a fluid-permeable substrate having one or more reaction zones therein, and containing in at least one of said zones, a biologically active reagent comprising:

(I) a water-insoluble particle composed of, at least on its surface, a copolymer having recurring units derived from:

(a) from about 60 to about 99.8 mole percent of one or more ethylenically unsaturated polymerizable oleophilic monomers which provide hydrophobicity to said copolymer,

(b) from about 0.2 to about 40 mole percent of one or more ethylenically unsaturated polymerizable monomers having a reactive carboxy group, or salt thereof, and represented by the structure: ##STR21## wherein R is hydrogen, halo or alkyl of 1 to 3 carbon atoms, M is hydrogen, an alkali metal ion or an ammonium ion and L is an organic linking group having from 8 to 50 atoms selected from the group consisting of carbon, nitrogen, oxygen and sulfur atoms in the linking chain, said organic linking group further defined as having two or more divalent groups selected from the group consisting of alkylene, arylene, alkylenearylene and arylenealkylene which are connected to each other or terminated with an oxy, thio, imino, carbonyloxy, carbonylimino, ureylene or sulfonylimino group, and

(c) from 0 to about 15 mole percent of one or more additional ethylenically unsaturated polymerizable monomers other than those identified in categories (a) and (b) above, and

(II) a biologically active substance covalently attached to said particle through said reactive carboxy group or salt thereof.

17. The element of claim 14 wherein said copolymer has recurring units derived from about 85 to about 99.5 mole percent of monomer (a), from about 0.5 to about 15 mole percent of monomer (b), and from 0 to about 10 mole percent of monomer (c), and wherein R is hydrogen or methyl, M is hydrogen or an alkali metal ion, and L comprises one or more alkylene or arylenealkylene groups which are connected or terminated with an oxy, thio, imino (--NR.sup.1 --), carbonyloxy (--COO--), carbonylimino (--CONR.sup.1 --), ureylene (--NR.sup.1

CONR.sup.1 --) or sulfonylimino (--SO.sub.2 NR.sup.1 --) group, wherein each R.sup.1 is independently hydrogen, alkyl having 1 to 10 carbon atoms, cycloalkyl having 4 to 10 carbon atoms, or aryl having 6 to 14 carbon atoms.

18. An analytical element comprising a nonporous support, having imposed thereon, in order and in fluid contact,

a reagent layer containing one or more reagents for providing a detectable signal in the assay,

a water-soluble layer containing a detectably labeled analog of the ligand of interest, and

a porous spreading layer containing a reagent comprising:

(I) a water-insoluble particle composed of, at least on its surface, a copolymer having recurring units derived from:

(a) from about 60 to about 99.8 mole percent of one or more ethylenically unsaturated polymerizable oleophilic monomers which provide hydrophobicity to said copolymer,

(b) from about 0.2 to about 40 mole percent of one or more ethylenically unsaturated polymerizable monomers having a reactive carboxy group, or salt thereof, and represented by the structure: ##STR22## wherein R is hydrogen, halo or alkyl of 1 to 3 carbon atoms, M is hydrogen, an alkali metal ion or an ammonium ion and L is an organic linking group having from 8 to 50 atoms selected from the group consisting of carbon, nitrogen, oxygen and sulfur atoms in the linking chain, said organic linking group further defined as having two or more divalent groups selected from the group consisting of alkylene, arylene, alkylenearylene and arylenealkylene which are connected to each other or terminated with an oxy, thio, imino, carbonyloxy, carbonylimino, ureylene or sulfonylimino group, and

(c) from 0 to about 15 mole percent of one or more additional ethylenically unsaturated polymerizable monomers other than those identified in categories (a) and (b) above, and

(II) a receptor for said ligand of interest covalently attached to said particle through said reactive carboxy group or salt thereof.

20. A kit for a hybridization assay for a nucleic acid of interest comprising:

a. a reagent comprising:

(I) a water-insoluble particle composed of, at least on its surface, a copolymer having recurring units derived from:

(a) from about 60 to about 99.8 mole percent of one or more ethylenically unsaturated polymerizable oleophilic monomers which provide hydrophobicity to said copolymer,

(b) from about 0.2 to about 40 mole percent of one or more ethylenically unsaturated polymerizable monomers having a reactive carboxy group, or salt thereof, and represented by the structure: ##STR23## wherein R is hydrogen, halo or alkyl of 1 to 3 carbon atoms, M is hydrogen, an alkali metal ion or an ammonium ion and L is an organic linking group having from 8 to 50 atoms selected from the group consisting of carbon, nitrogen, oxygen and sulfur atoms in the linking chain, said organic linking group further defined as having two or more divalent groups selected from the group consisting of alkylene, arylene, alkylenearylene and arylenealkylene which are connected to each other or terminated with an oxy, thio, imino, carbonyloxy,

carbonylimino, ureylene or sulfonylimino group, and

(c) from 0 to about 15 mole percent of one or more additional ethylenically unsaturated polymerizable monomers other than those identified in categories (a) and (b) above, and

(II) an oligonucleotide covalently attached to said particle through said reactive carboxy group or salt thereof, said oligonucleotide being substantially complementary to a nucleic acid of interest, and

b. one or more reagents, solutions, or equipment needed to perform an assay selected from the group consisting of labelled probes, polymerase chain reaction reagents, wash solutions, extraction solutions, pipettes, filters, and test devices.

21. A kit for a specific binding assay for the determination of a ligand of interest comprising:

a. a reagent comprising:

(I) a water-insoluble particle composed of, at least on its surface, a copolymer having recurring units derived from:

(a) from about 60 to about 99.8 mole percent of one or more ethylenically unsaturated polymerizable oleophilic monomers which provide hydrophobicity to said copolymer,

(b) from about 0.2 to about 40 mole percent of one or more ethylenically unsaturated polymerizable monomers having a reactive carboxy group, or salt thereof, and represented by the structure: ##STR24## wherein R is hydrogen, halo or alkyl of 1 to 3 carbon atoms, M is hydrogen, an alkali metal ion or an ammonium ion and L is an organic linking group having from 8 to 50 atoms selected from the group consisting of carbon, nitrogen, oxygen and sulfur atoms in the linking chain, said organic linking group defined as having two or more divalent groups selected from the group consisting of alkylene, arylene, alkylenearylene and arylenealkylene which are connected to each other or terminated with an oxy, thio, imino, carbonyloxy, carbonylimino, ureylene or sulfonylimino group, and

(c) from 0 to about 15 mole percent of one or more additional ethylenically unsaturated polymerizable monomers other than those identified in categories (a) and (b) above, and

(II) a biologically active substance covalently attached to said particle through said reactive carboxy group or salt thereof, said substance being specifically reactive with either said ligand of interest or a receptor therefor, and

b. one or more additional reagents, solutions, or articles needed to perform an assay selected from the group consisting of ligand analogs, labelled receptors, wash solutions, extraction reagents, substrates, dye providing compositions, filters, and test devices.

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☐ 13. Document ID: US 5073379 A

L20: Entry 13 of 13 File: USPT Dec 17, 1991

DOCUMENT-IDENTIFIER: US 5073379 A
TITLE: Continuous preparation of solid pharmaceutical forms

CLAIMS:

1. A process for tabletting a mixture of

one or more pharmaceutical active compounds,

one or more pharmacologically acceptable thermoplastic polymers, said polymers having a Fikentscher K value of from 10 to 100, and

optional pharmaceutical auxiliaries,

said mixture having a glass transition temperature below the decomposition temperature of all components of said mixture

wherein said mixture is heated, without thermal and/or oxidative degradation, at a temperature of from 50.degree. to 180.degree. to render the mixture extrudable and said heated mixture is extruded at from 50.degree. to 180.degree. and the still formable extrudate is pressed between two belts or a belt and a roller to give tablets, said two belts or said belt and a roller making contact in parts, rotating in opposite directions and running parallel along a contact zone, at least one of said two belts or at least one of said belt and a roller having shape-imparting indentations.

3. A process as claimed in claim 1, wherein two metal link belts which contain the shape-imparting indentations in corresponding pairs are used.

15. A process as claimed in claim 14, wherein one or more active compounds from the following group are used: acetaminophen (=paracetamol), acetohexamide, acetyldigoxin, acetylsalicylic acid, acromycin, anipamil, benzocaine, .beta.-carotene, chloramphenicol, chlordiazepoxide, chlormadinone acetate, chlorothiazide, cinnarizine, clonazepam, codeine, dexamethasone, diazepam, dircumarol, digitoxin, digoxin, dihydroergotamine, drotaverine, flunitrazepam, furosemide, gramicidin, griseofulvin, hexobarbital, hydrochlorothiazide, hydrocortisone, hydroflumethiazide, indomethacin, ketoprofen, lonetil, medazepam, mefruside, methandrostenolone, methylprednisolone, methylsulfadiazine (=sulfaperin), nalidixic acid, nifedipine, nitrazepam, nitrofurantoin, nystatin, estradiol, papaverine, phenacetin, phenobarbital, phenylbutrazone, phenytoin, prednisone, reserpine, spironolactone, streptomycin, sulfadimidine(=sulfamethazine), sulfamethizole, sulfamethoxazole, sulfamethoxydiazine (=sulfameter), sulfaperin sulfathiazole, sulfisoxazole, testosterone, tolazamide, tolbutamide, trimethoprim and tyrothricin.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
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Terms	Documents
l17 and (strep$ or l12 or c-polysaccharide or polysaccharide-c or c-substance or trideoxygalactose or choline or phosphorylcholine).clm.	13

Display Format: KWIC | Change Format

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WEST Search History

DATE: Monday, February 11, 2002

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=AND			
L1	(au or sol or gold or metal$).clm.	300292	L1
L2	L1 and (pnc or pneumon$ or c-polysaccharide or polysaccharide-c or c-substance or trideoxygalactose or choline or phosphorylcholine).clm.	186	L2
L3	L2 and (flow or flowing or laterial or chromatograph$ or immunochromatograph$ or immuno-chromatograph$ or strip or test or bibulous or transport or device or apparatus).clm.	32	L3
L4	l1 and (antibod$ or monoclonal or target or ligand or binder or mip or sbp or polyclonal or antiser$ or monospecific or mono-specific or binding-partner or bp).clm.	16900	L4
L5	l1 same (antibod$ or monoclonal or target or ligand or binder or mip or sbp or polyclonal or antiser$ or monospecific or mono-specific or binding-partner or bp).clm.	7864	L5
L6	l5 and (flow or flowing or laterial or chromatograph$ or immunochromatograph$ or immuno-chromatograph$ or strip or test or bibulous or transport or device or apparatus).clm.	1380	L6
	L6 and (pnc or pneumon$ or c-polysaccharide		

L7	or polysaccharide-c or c-substance or trideoxygalactose or choline or phosphorylcholine).clm.	0	L7
L8	l6 and streptoc$.clm.	1	L8
L9	l6 and immunochromatograph$	4	L9
L10	l6 and immuno-chromatograph$	0	L10
L11	l6 and chromatograph$	146	L11
L12	(diplococci or diplo-cocc$ or diplococc$).clm.	29	L12
L13	L12 and l1	1	L13
L14	l1 and (flow or flowing or laterial or chromatograph$ or immunochromatograph$ or immuno-chromatograph$ or strip or test or bibulous or transport or device or apparatus).clm.	102015	L14
L15	L14 and l4	3691	L15
L16	L15 and (strep$ or l12 or c-polysaccharide or polysaccharide-c or c-substance or trideoxygalactose or choline or phosphorylcholine).clm.	43	L16
L17	l1 and zone.clm.	12333	L17
L18	l17 and l2L17	0	L18
L19	l17 and l2	2	L19
L20	l17 and (strep$ or l12 or c-polysaccharide or polysaccharide-c or c-substance or trideoxygalactose or choline or phosphorylcholine).clm.	13	L20

END OF SEARCH HISTORY